Utah Department of Transportation
Traffic Management Division

September 2015

Monthly Report

2060 South 2760 West Salt Lake City, Utah 84104 801-887-3710 www.udottraffic.utah.gov

Mission of the Traffic Management Division

- To Support UDOT and the Department of Public Safety to Achieve Zero Fatalities.
- To Help Provide Reliable and Efficient Travel Throughout Utah.
- To Provide Useful and Timely Real-time Traffic Information.
- To Work Together with Other Government Agencies to Serve the Public.
- To Provide Excellent Customer Service.

Field Devices Summary

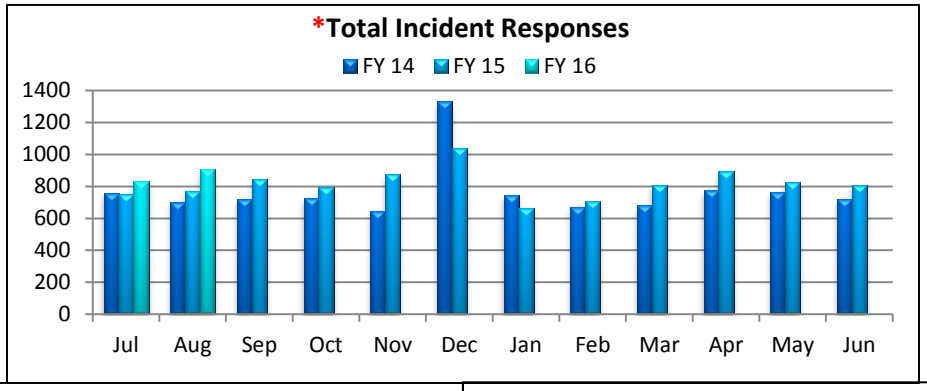
Freeway PTZ Cameras	370	Freeway VMS	96
Arterial PTZ Cameras	447	Surface Street VMS	49
RWIS & Contracted Weather Cameras	210	Portable TOC VMS	6
Viewable Detection Cameras	67	Legacy Trucks Prohibited VMS	21
Total Cameras	1094	Variable Speed Limit VMS	15
HAR (27 permanent/5 portable)	32	Chain-Up Signs	19
RWIS	98	Total VMS	206
Ramp Meters	63	TMS	545
Express Lane Plazas	63	Traffic Signals	2114

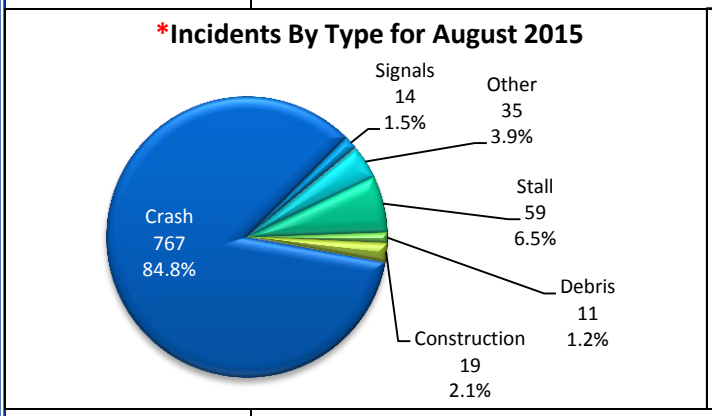
Operations Summary

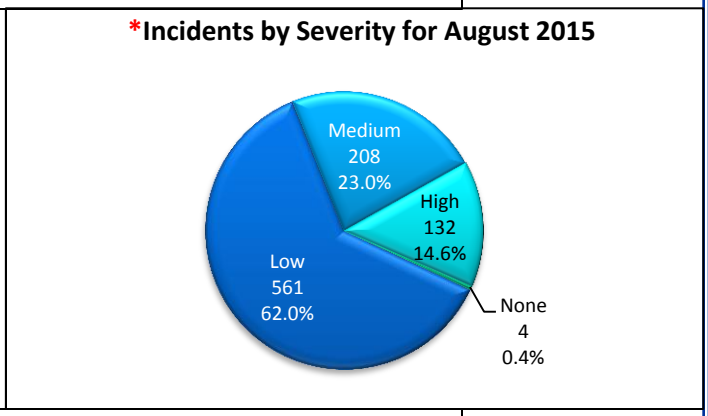
VMS Messages Displayed	84,041	IMT Assists	2073
Signal Timing Work Orders	37	Website Visitor Sessions	88,714
Signal Maintenance Work Orders	159	511 Calls	6,830
All New Work Orders	509	Weather Desk Calls	170
Incident Responses by the TOC	905	Ask CommuterLink Questions	44
Incident Duration Average Minutes	58	UDOT Traffic Followers and Re-tweets	310,721

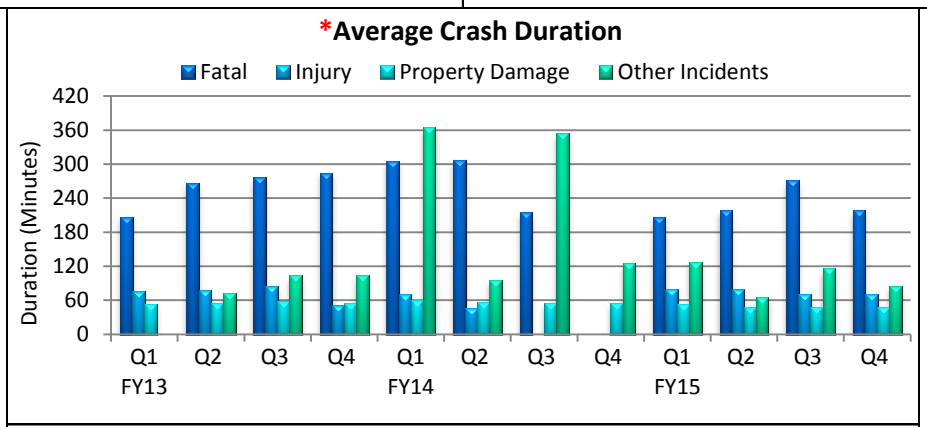
*Safety – *Note: Due to a server change. No safety data was captured for September*

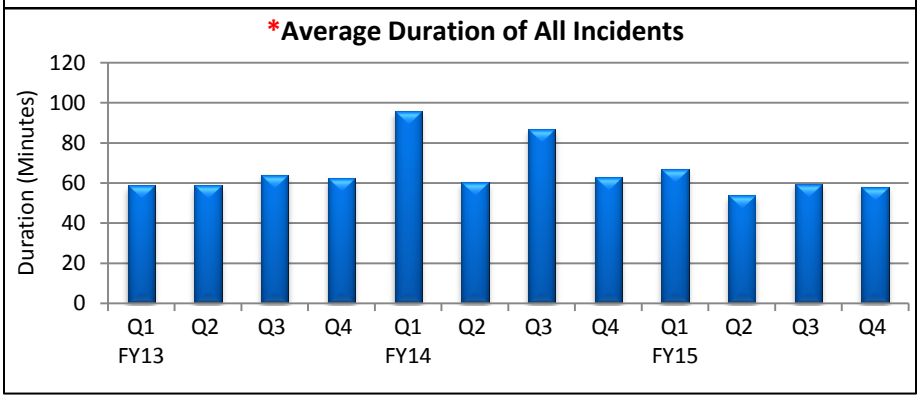
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.

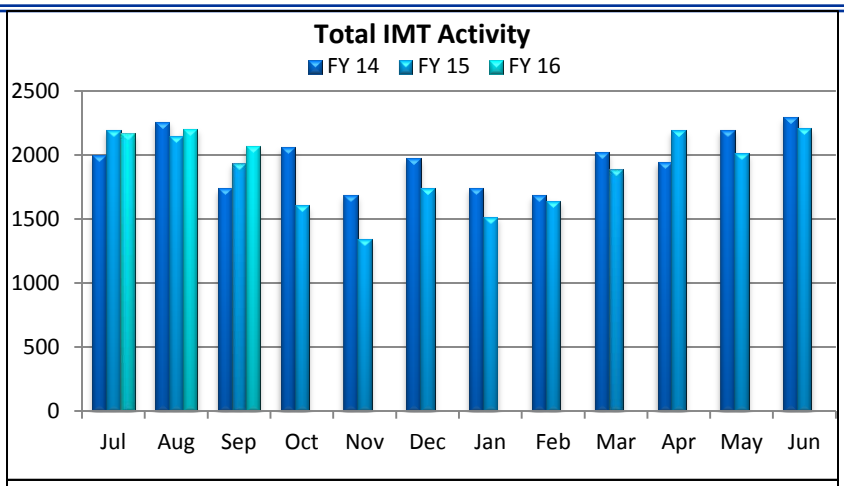


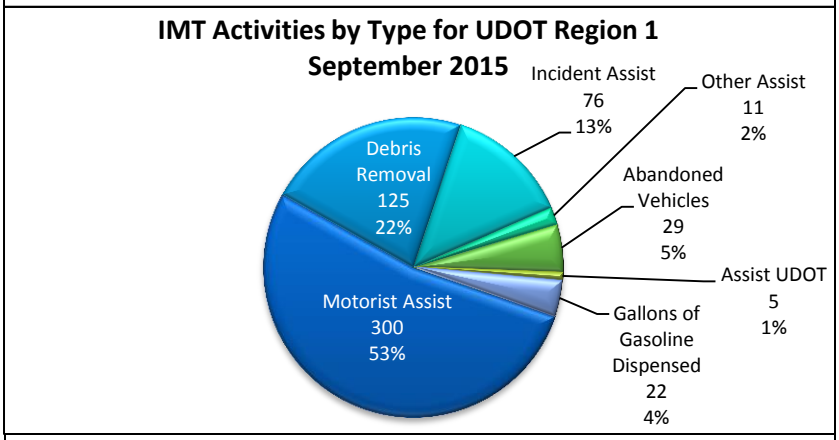


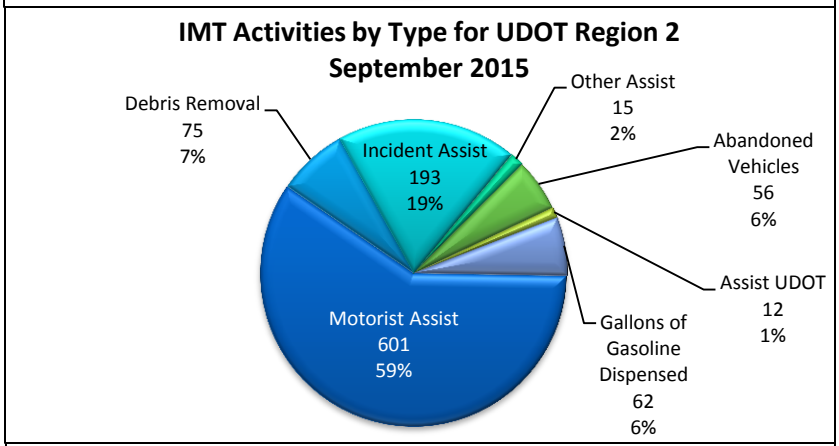


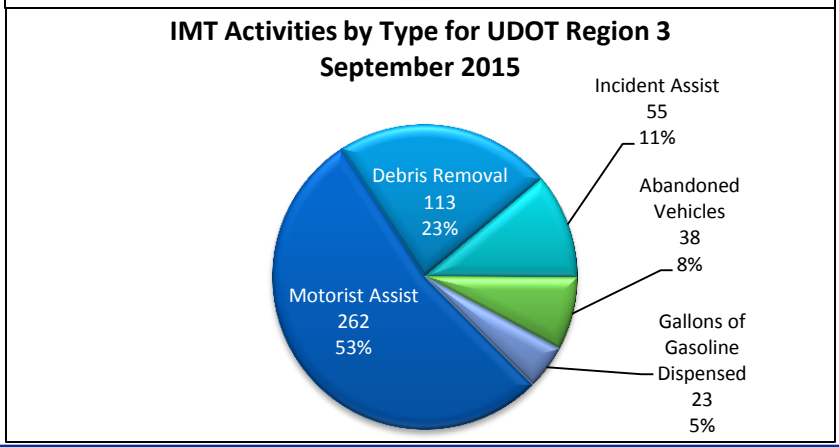





Total IMT Activity
FY 14
FY 15
FY 16
2500
2000
1500
1000
500
0
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun


IMT Activities by Type for UDOT Region 1
September 2015
Incident Assist
76
13%
Other Assist
11
2%
Abandoned
Vehicles
29
5%
Assist UDOT
5
1%
Gallons of
Gasoline
Dispensed
22
4%
Debris
Removal
125
22%
Motorist Assist
300
53%


IMT Activities by Type for UDOT Region 2
September 2015
Debris Removal
75
7%
Other Assist
15
2%
Abandoned
Vehicles
56
6%
Assist UDOT
12
1%
Gallons of
Gasoline
Dispensed
62
6%
Incident Assist
193
19%
Motorist Assist
601
59%


IMT Activities by Type for UDOT Region 3
September 2015
Incident Assist
55
11%
Abandoned
Vehicles
38
8%
Gallons of
Gasoline
Dispensed
23
5%
Debris Removal
113
23%
Motorist Assist
262
53%

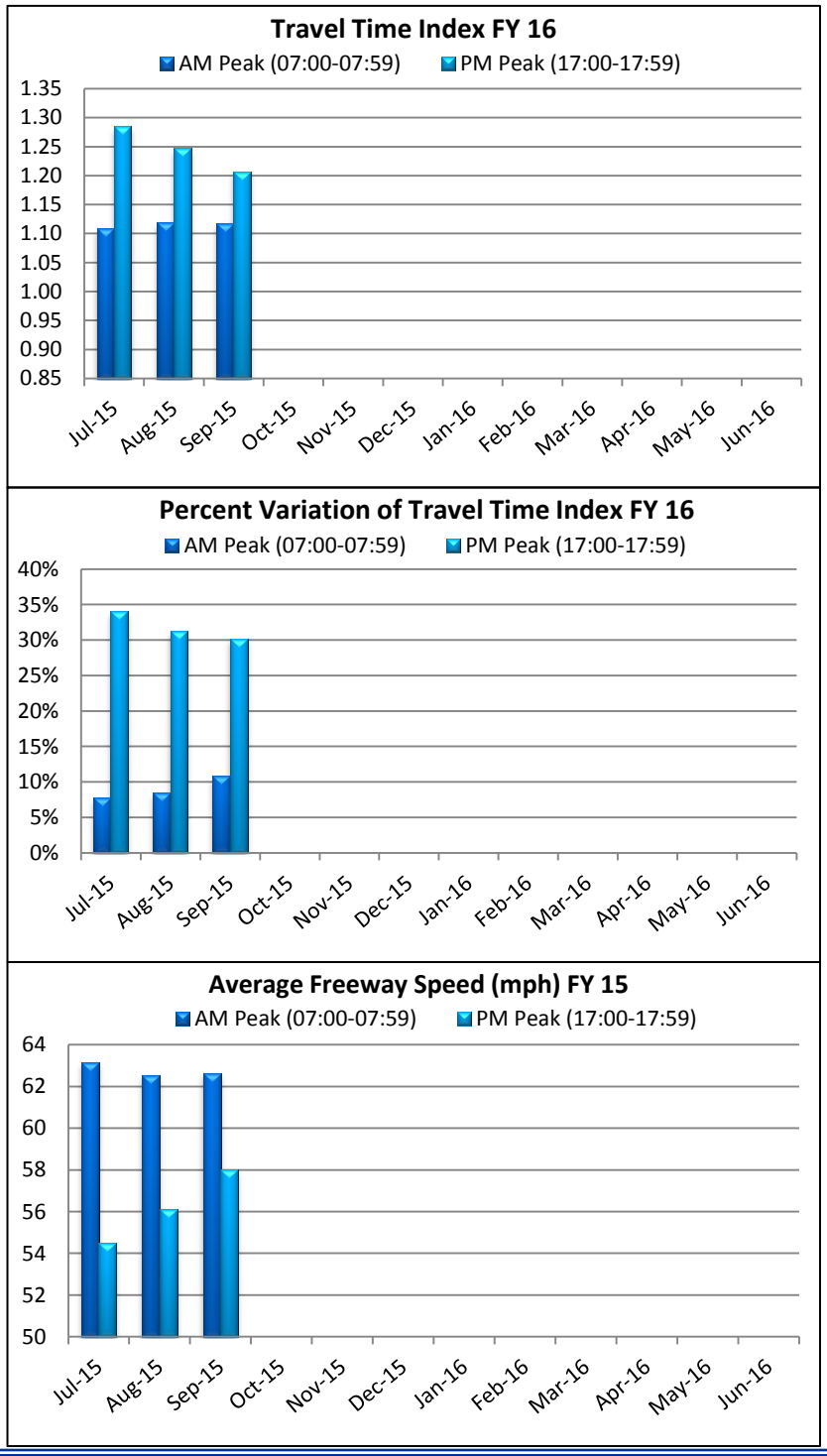
Freeway Traffic Level of Service

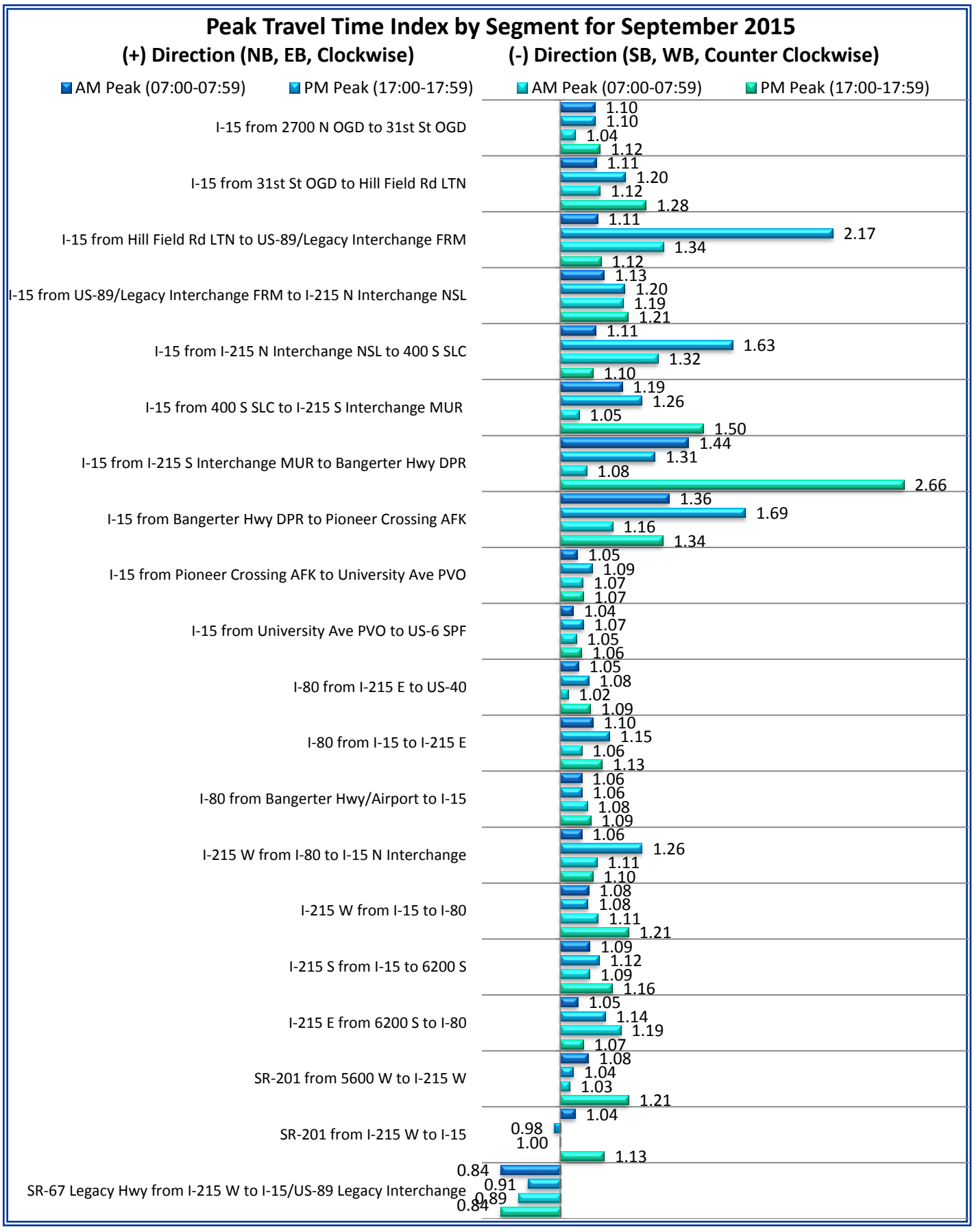
Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Wasatch Front. As more TMS sites are installed throughout the state, they will be included in these performance measures.

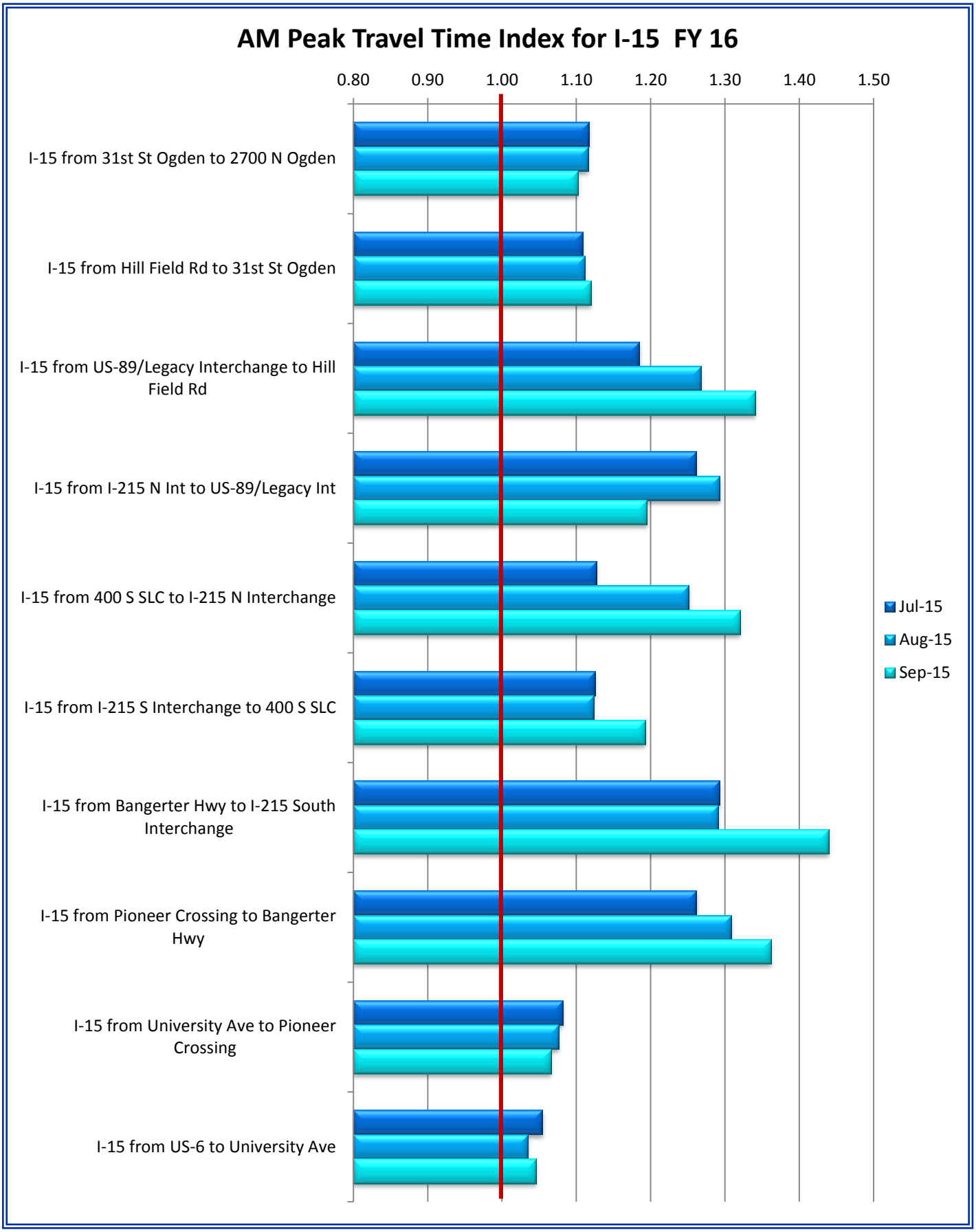
Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

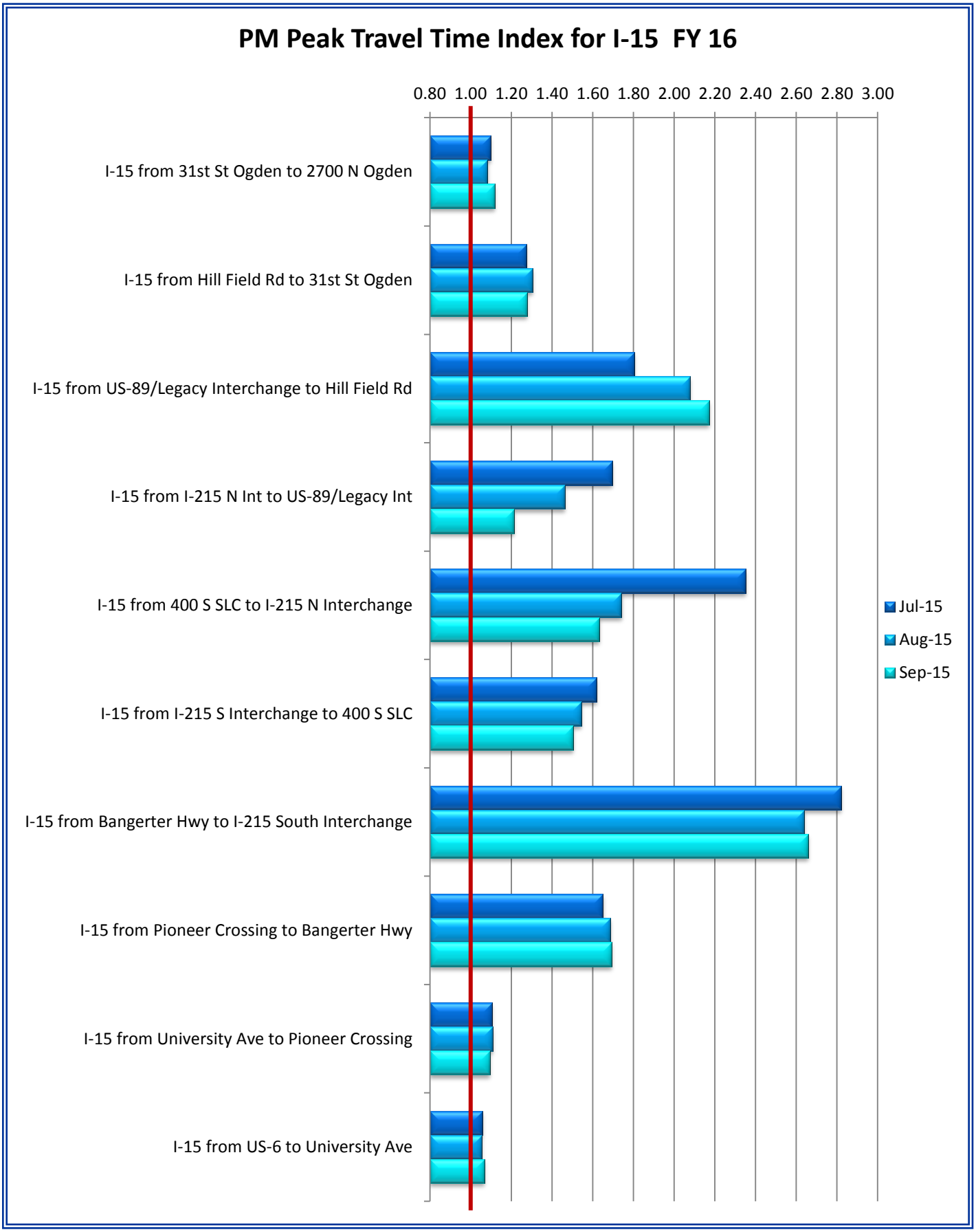
Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

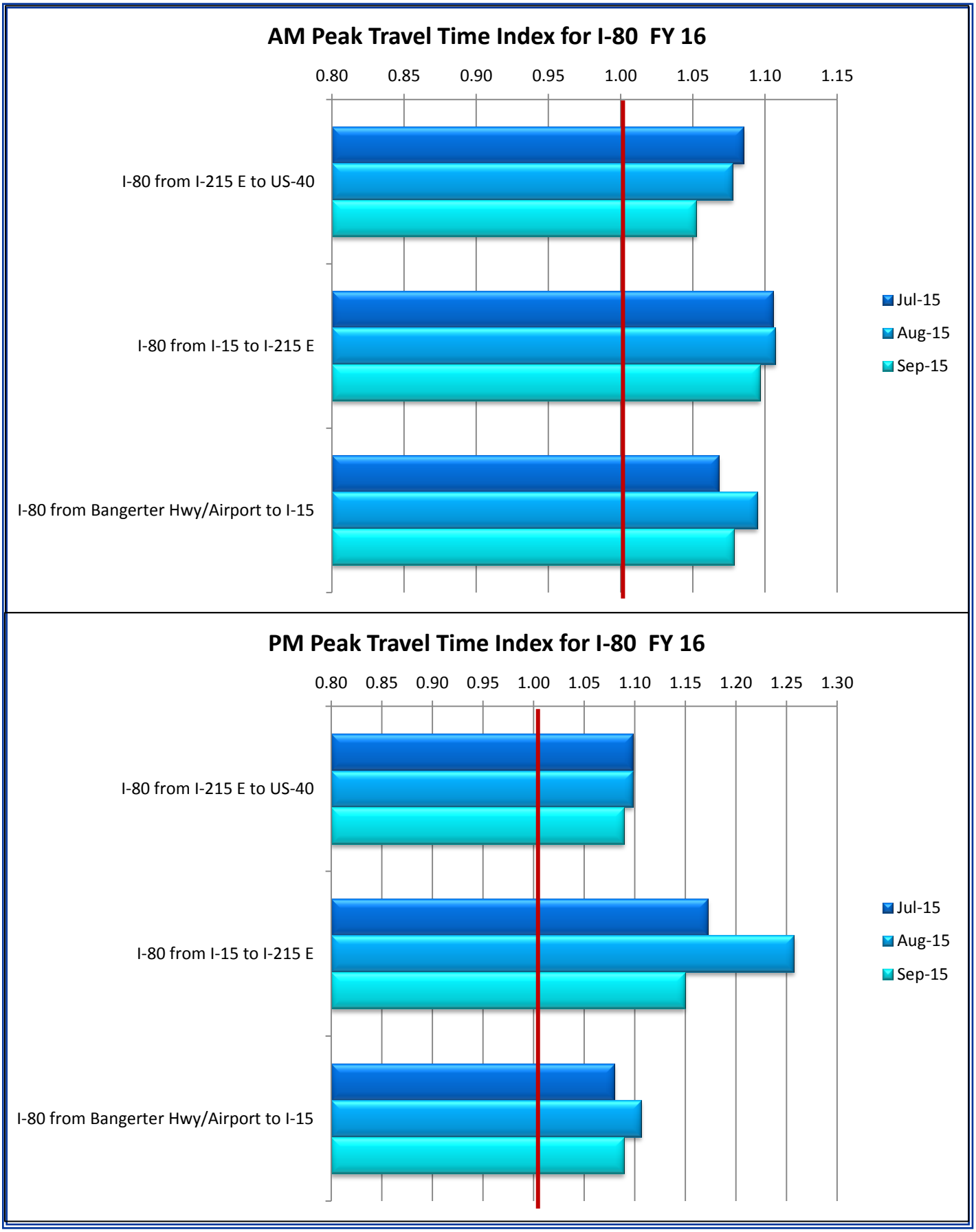
Average Freeway Speed: The freeway speed is weighted by volume.

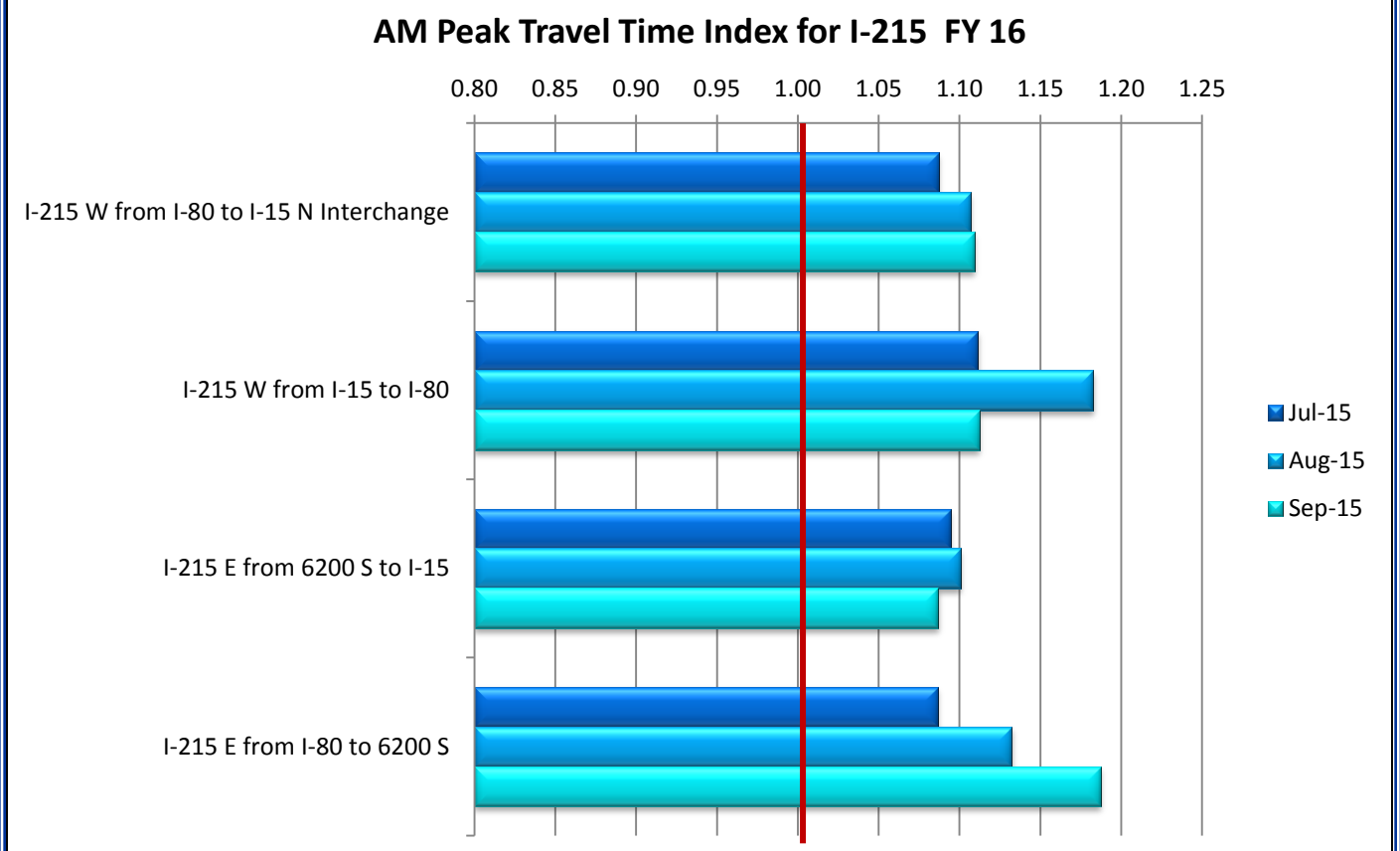


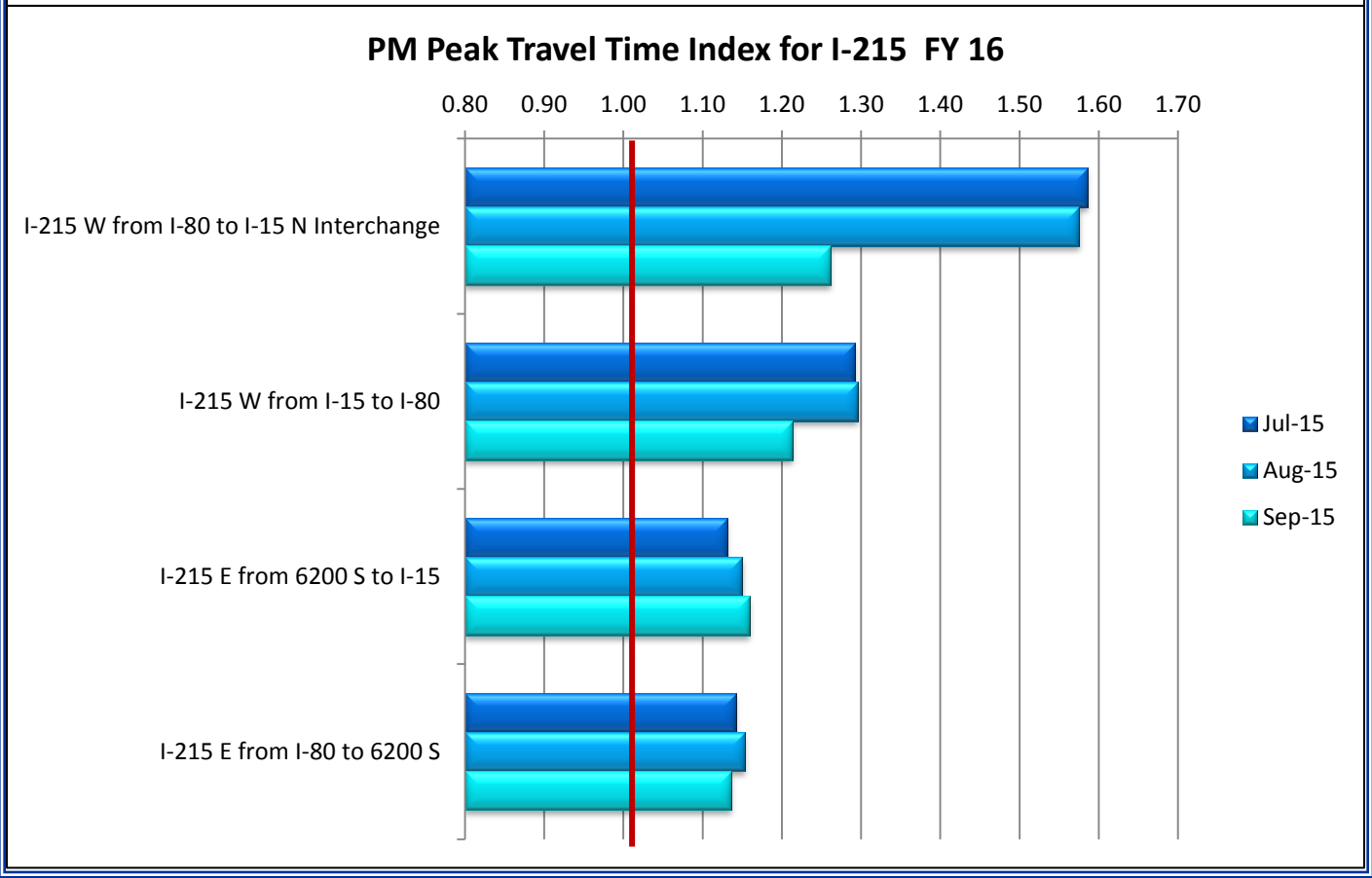

Peak Travel Time Index by Segment for September 2015
(+) Direction (NB, EB, Clockwise)
(-) Direction (SB, WB, Counter Clockwise)
AM Peak (07:00-07:59)
PM Peak (17:00-17:59)
AM Peak (07:00-07:59)
PM Peak (17:00-17:59)
I-15 from 2700 N OGD to 31st St OGD
1.10
1.10
1.04
1.12
I-15 from 31st St OGD to Hill Field Rd LTN
1.11
1.20
1.12
1.28
I-15 from Hill Field Rd LTN to US-89/Legacy Interchange FRM
1.11
2.17
1.34
1.12
I-15 from US-89/Legacy Interchange FRM to I-215 N Interchange NSL
1.13
1.20
1.19
1.21
I-15 from I-215 N Interchange NSL to 400 S SLC
1.11
1.63
1.32
1.10
I-15 from 400 S SLC to I-215 S Interchange MUR
1.19
1.26
1.05
1.50
I-15 from I-215 S Interchange MUR to Bangerter Hwy DPR
1.44
1.31
1.08
2.66
I-15 from Bangerter Hwy DPR to Pioneer Crossing AFK
1.36
1.69
1.16
1.34
I-15 from Pioneer Crossing AFK to University Ave PVO
1.05
1.09
1.07
1.07
I-15 from University Ave PVO to US-6 SPF
1.04
1.07
1.05
1.06
I-80 from I-215 E to US-40
1.05
1.08
1.02
1.09
I-80 from I-15 to I-215 E
1.10
1.15
1.06
1.13
I-80 from Bangerter Hwy/Airport to I-15
1.06
1.06
1.08
1.09
I-215 W from I-80 to I-15 N Interchange
1.06
1.26
1.11
1.10
I-215 W from I-15 to I-80
1.08
1.08
1.11
1.21
I-215 S from I-15 to 6200 S
1.09
1.12
1.09
1.16
I-215 E from 6200 S to I-80
1.05
1.14
1.19
1.07
SR-201 from 5600 W to I-215 W
1.08
1.04
1.03
1.21
SR-201 from I-215 W to I-15
1.04
0.98
1.00
1.13
SR-67 Legacy Hwy from I-215 W to I-15/US-89 Legacy Interchange
0.84
0.91
0.89
0.84

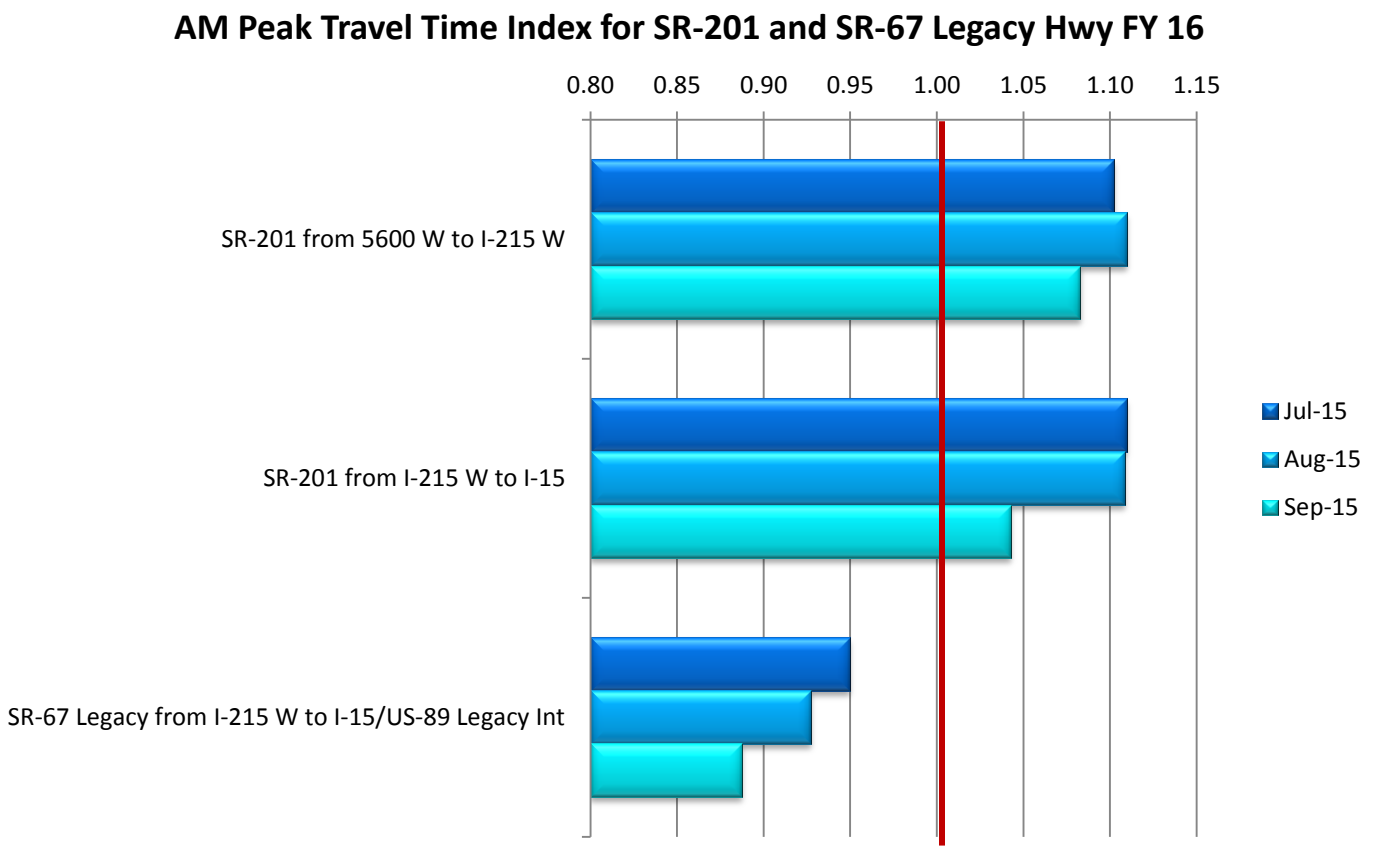

AM Peak Travel Time Index for I-15 FY 16
0.80
0.90
1.00
1.10
1.20
1.30
1.40
1.50
I-15 from 31st St Ogden to 2700 N Ogden
I-15 from Hill Field Rd to 31st St Ogden
I-15 from US-89/Legacy Interchange to Hill Field Rd
I-15 from I-215 N Int to US-89/Legacy Int
I-15 from 400 S SLC to I-215 N Interchange
I-15 from I-215 S Interchange to 400 S SLC
I-15 from Bangerter Hwy to I-215 South Interchange
I-15 from Pioneer Crossing to Bangerter Hwy
I-15 from University Ave to Pioneer Crossing
I-15 from US-6 to University Ave
Jul-15
Aug-15
Sep-15

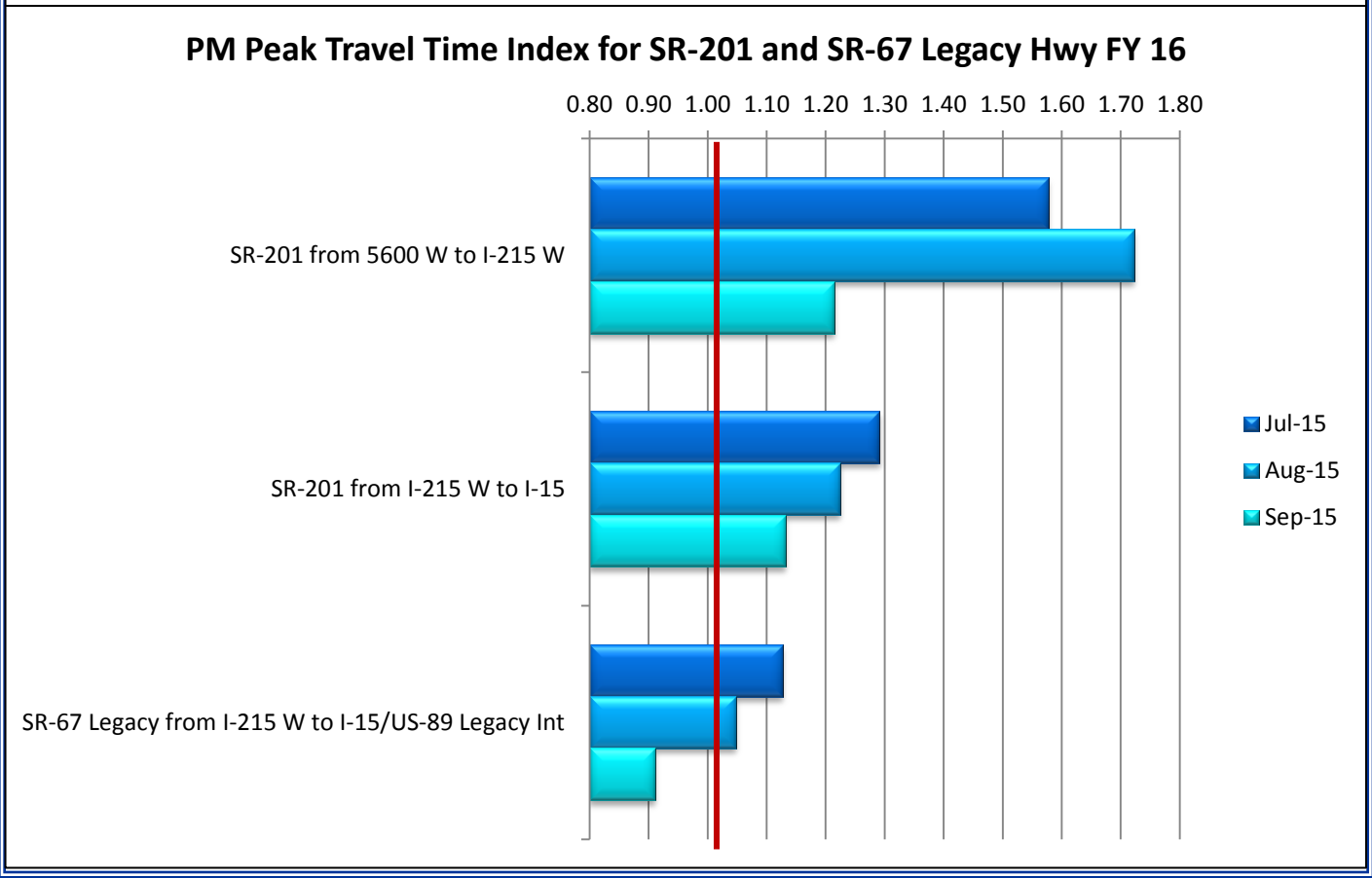

PM Peak Travel Time Index for I-15 FY 16
0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00
I-15 from 31st St Ogden to 2700 N Ogden
I-15 from Hill Field Rd to 31st St Ogden
I-15 from US-89/Legacy Interchange to Hill Field Rd
I-15 from I-215 N Int to US-89/Legacy Int
I-15 from 400 S SLC to I-215 N Interchange
I-15 from I-215 S Interchange to 400 S SLC
I-15 from Bangerter Hwy to I-215 South Interchange
I-15 from Pioneer Crossing to Bangerter Hwy
I-15 from University Ave to Pioneer Crossing
I-15 from US-6 to University Ave
Jul-15
Aug-15
Sep-15


AM Peak Travel Time Index for I-80 FY 16
0.80
0.85
0.90
0.95
1.00
1.05
1.10
1.15
I-80 from I-215 E to US-40
I-80 from I-15 to I-215 E
I-80 from Bangerter Hwy/Airport to I-15
Jul-15
Aug-15
Sep-15
PM Peak Travel Time Index for I-80 FY 16
0.80
0.85
0.90
0.95
1.00
1.05
1.10
1.15
1.20
1.25
1.30
I-80 from I-215 E to US-40
I-80 from I-15 to I-215 E
I-80 from Bangerter Hwy/Airport to I-15
Jul-15
Aug-15
Sep-15

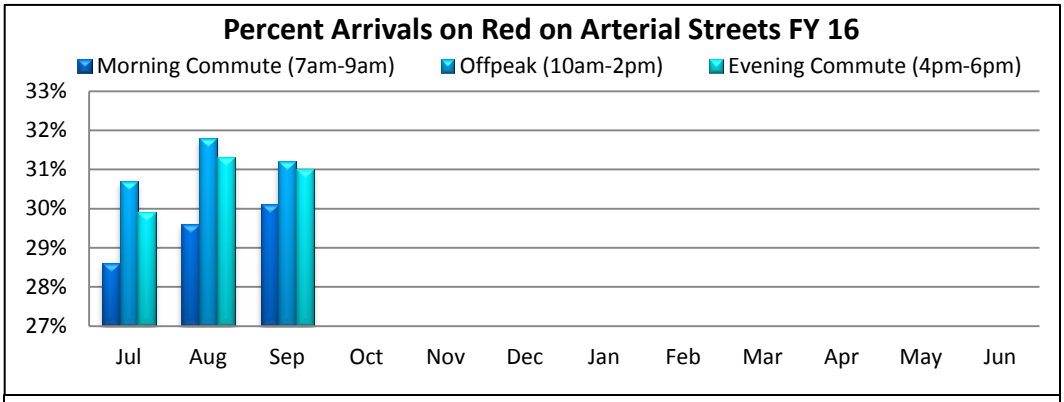

AM Peak Travel Time Index for I-215 FY 16
0.80
0.85
0.90
0.95
1.00
1.05
1.10
1.15
1.20
1.25
I-215 W from I-80 to I-15 N Interchange
I-215 W from I-15 to I-80
I-215 E from 6200 S to I-15
I-215 E from I-80 to 6200 S
Jul-15
Aug-15
Sep-15

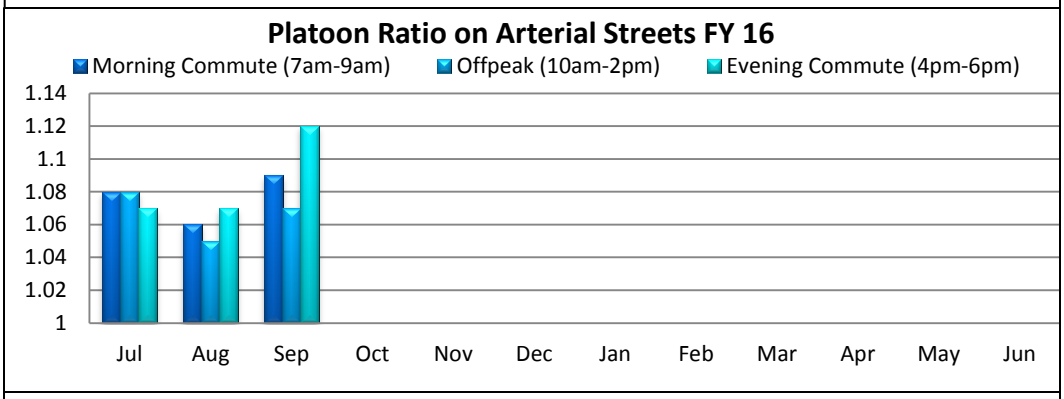

PM Peak Travel Time Index for I-215 FY 16
0.80
0.90
1.00
1.10
1.20
1.30
1.40
1.50
1.60
1.70
I-215 W from I-80 to I-15 N Interchange
I-215 W from I-15 to I-80
I-215 E from 6200 S to I-15
I-215 E from I-80 to 6200 S
Jul-15
Aug-15
Sep-15

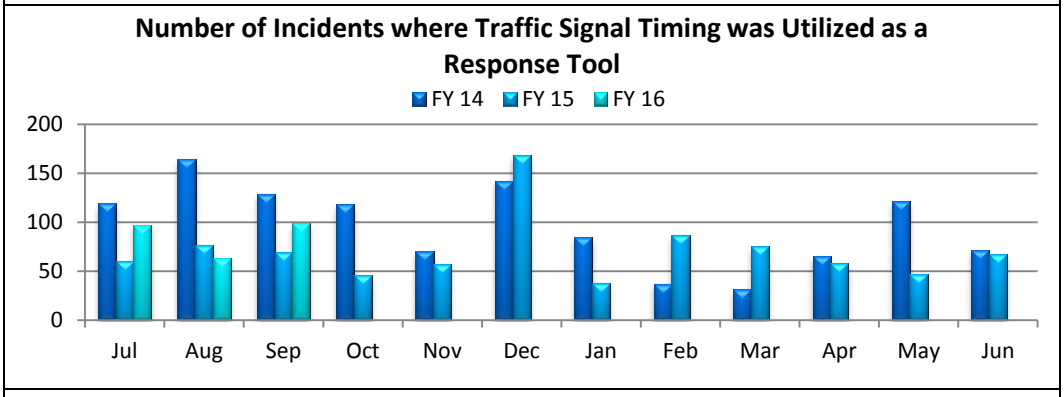

AM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 16
0.80
0.85
0.90
0.95
1.00
1.05
1.10
1.15
SR-201 from 5600 W to I-215 W
SR-201 from I-215 W to I-15
SR-67 Legacy from I-215 W to I-15/US-89 Legacy Int
Jul-15
Aug-15
Sep-15

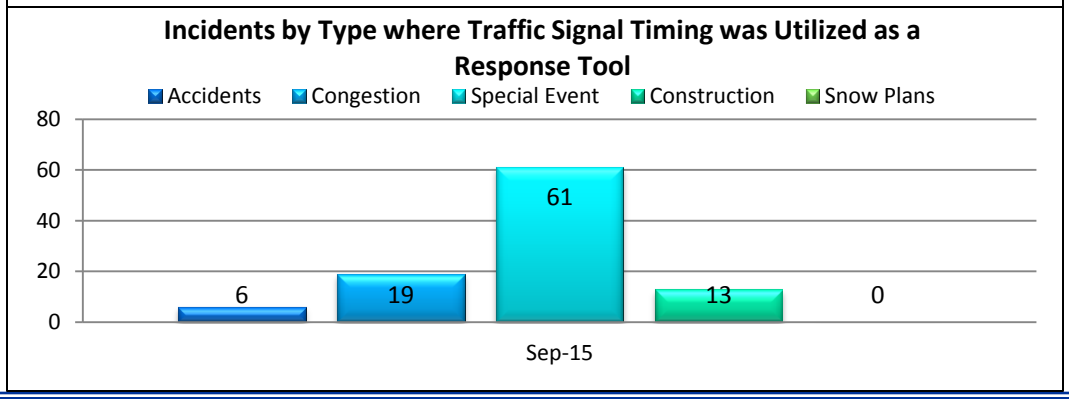

PM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 16
0.80
0.90
1.00
1.10
1.20
1.30
1.40
1.50
1.60
1.70
1.80
SR-201 from 5600 W to I-215 W
SR-201 from I-215 W to I-15
SR-67 Legacy from I-215 W to I-15/US-89 Legacy Int
Jul-15
Aug-15
Sep-15

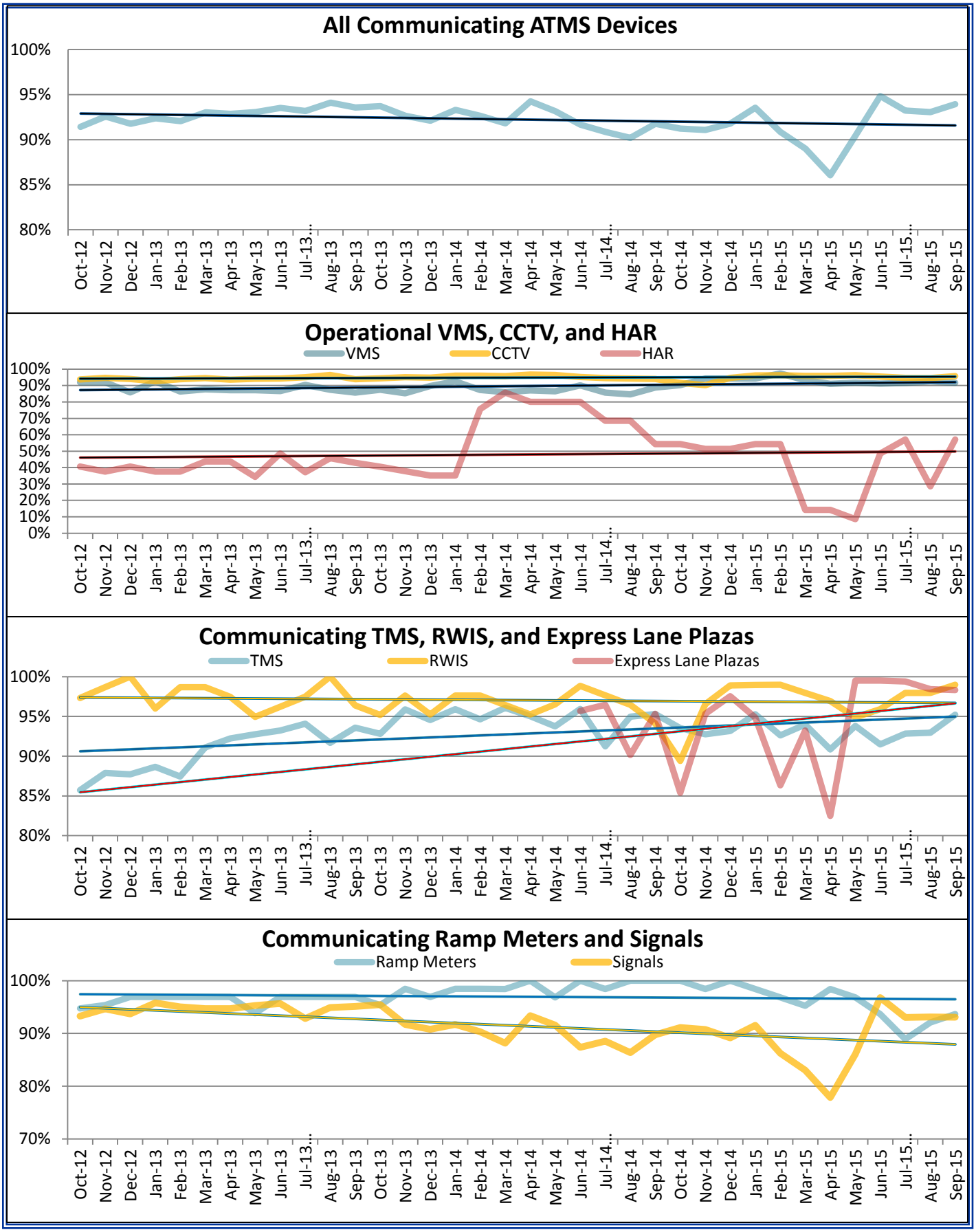
The percent arrival on red along the arterial statistics are generated automatically through the automated traffic signal performance measures, which show real-time and historical functionality at signalized intersections. The system automatically time-stamps when each vehicle arrives at the intersection and then compares the detection time-stamp if the phase was green or red. The percent arrival on red data is averaged over the 24 hours of the day and days in the month. . The lower charts shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.



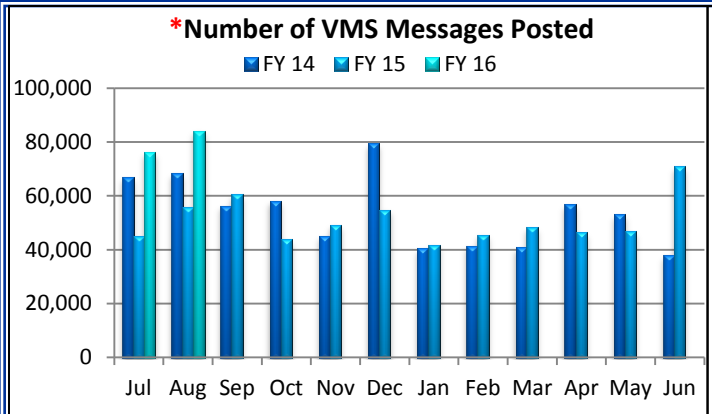


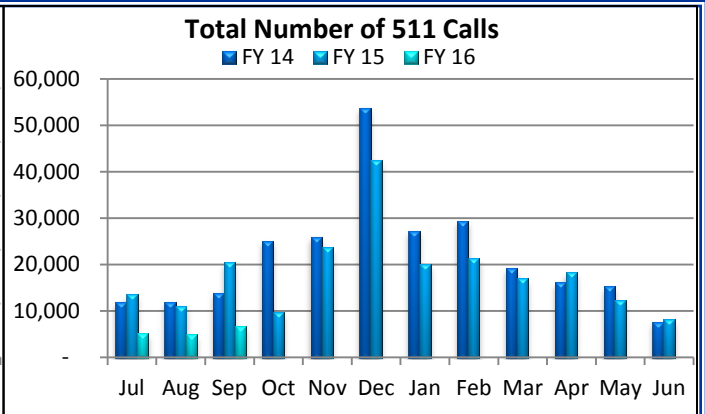


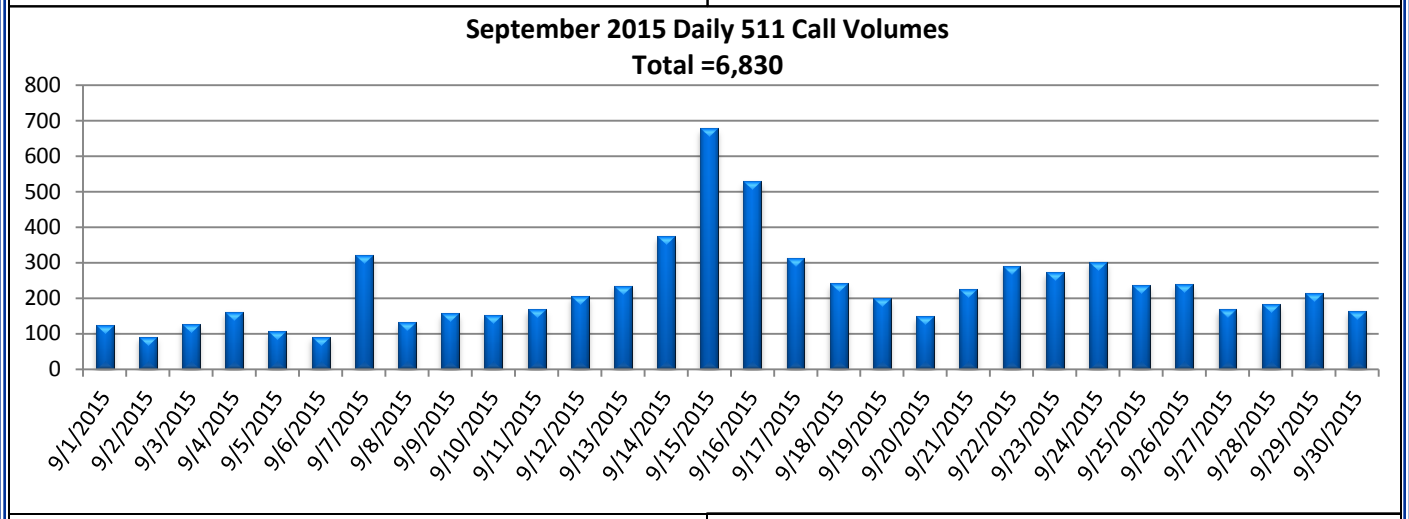


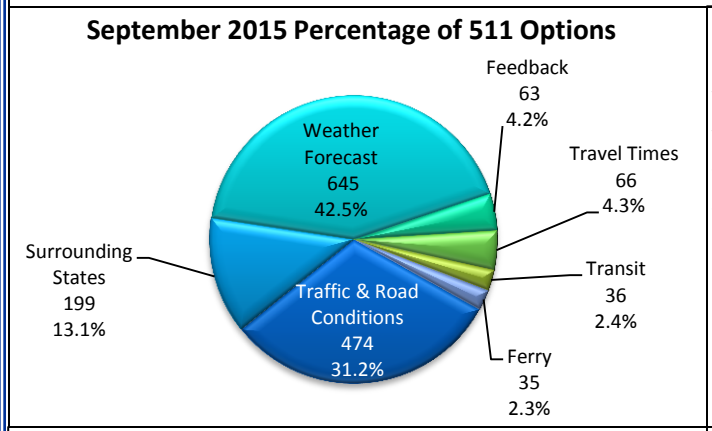

All Communicating ATMS Devices
100%
95%
90%
85%
80%
Oct-12
Nov-12
Dec-12
Jan-13
Feb-13
Mar-13
Apr-13
May-13
Jun-13
Jul-13...
Aug-13
Sep-13
Oct-13
Nov-13
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14
May-14
Jun-14
Jul-14...
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15...
Aug-15
Sep-15
Operational VMS, CCTV, and HAR
VMS
CCTV
HAR
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Communicating TMS, RWIS, and Express Lane Plazas
TMS
RWIS
Express Lane Plazas
100%
95%
90%
85%
80%
Communicating Ramp Meters and Signals
Ramp Meters
Signals
100%
90%
80%
70%

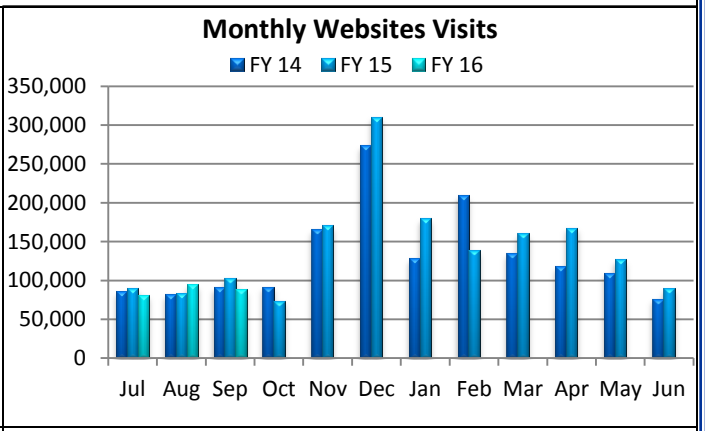
Traveler Information *Note – No VMS Data received for September

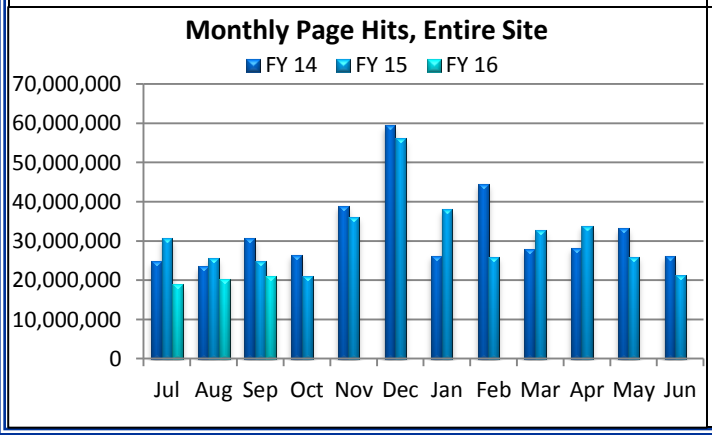


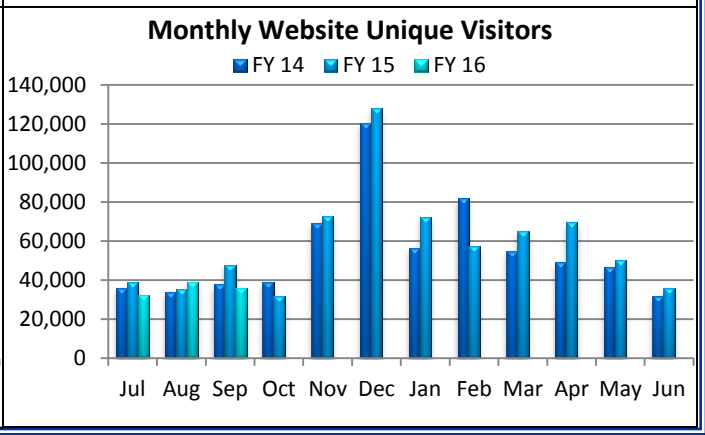


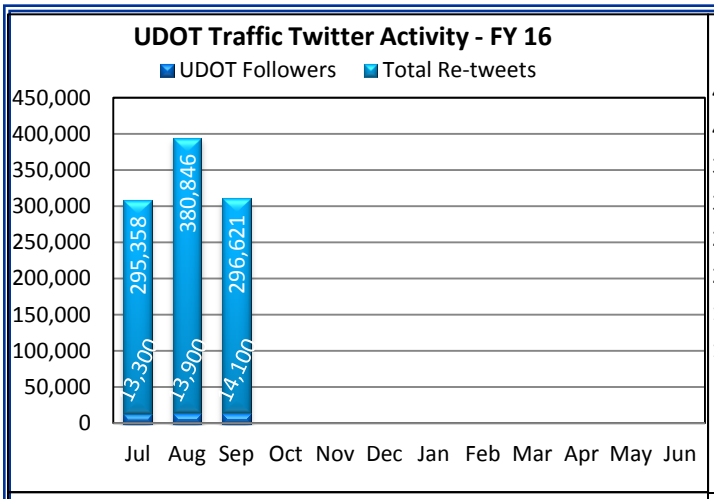


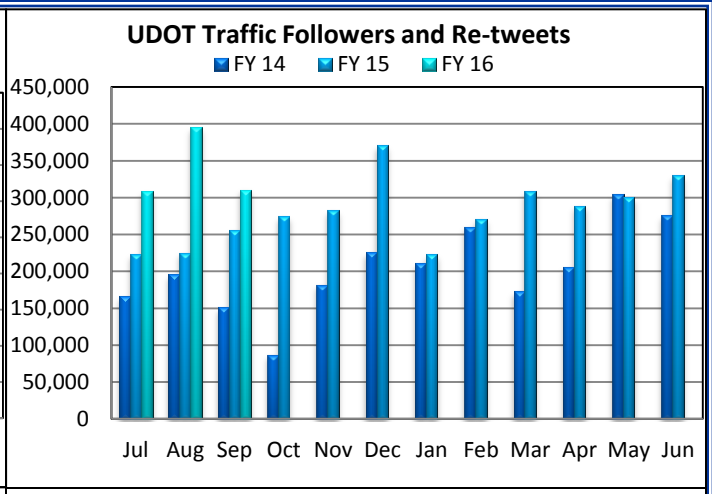


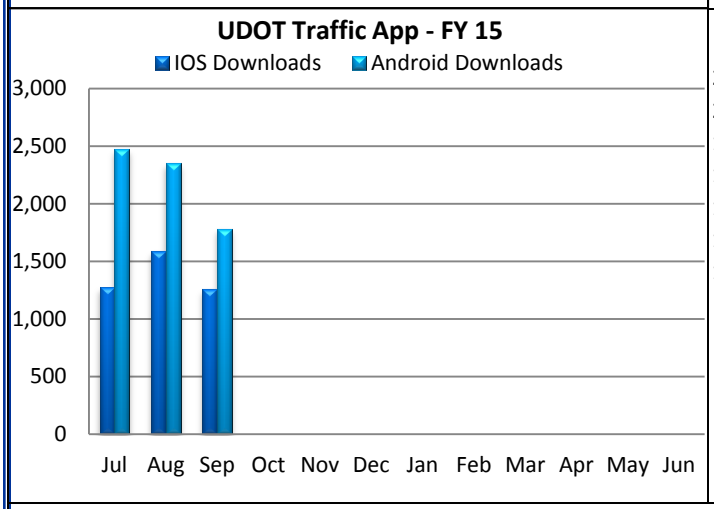


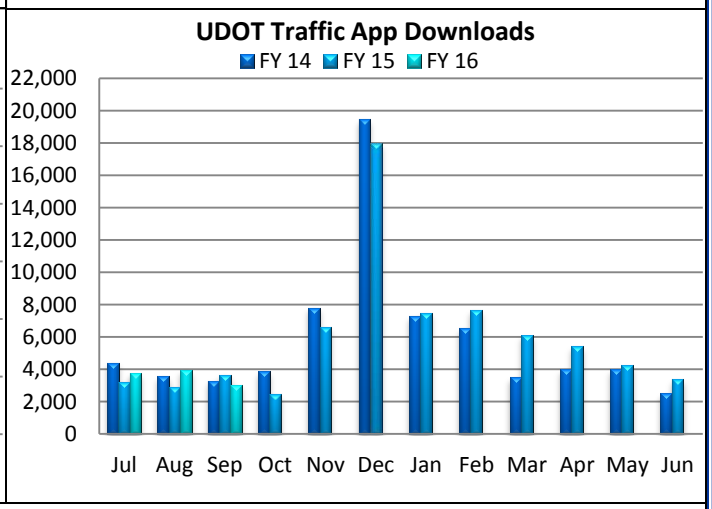


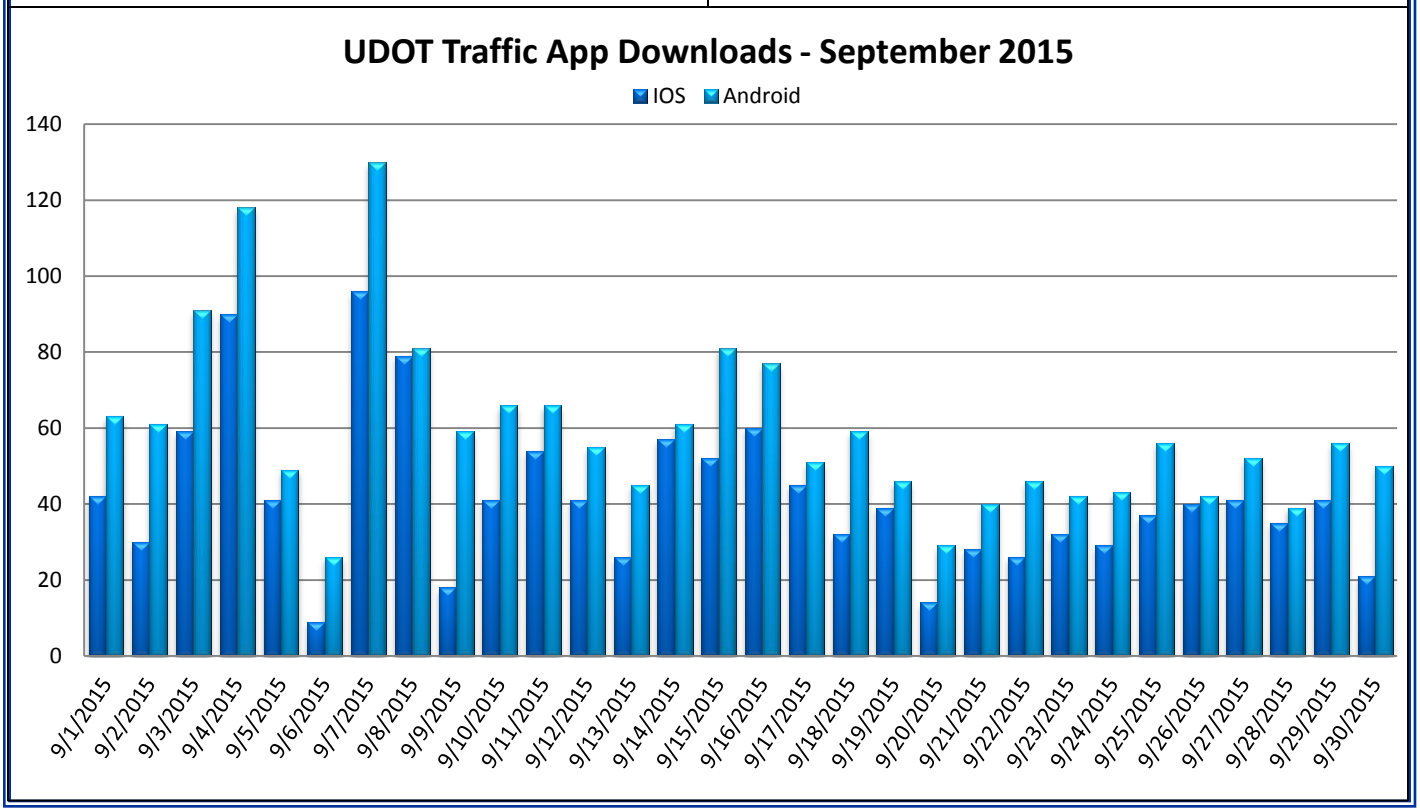


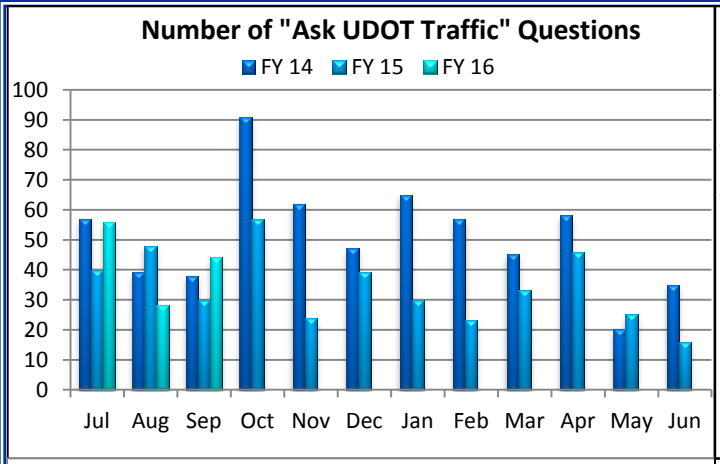

UDOT Traffic Twitter Activity - FY 16
UDOT Followers
Total Re-tweets
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
295,358
380,846
296,621
13,300
13,900
14,100
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun

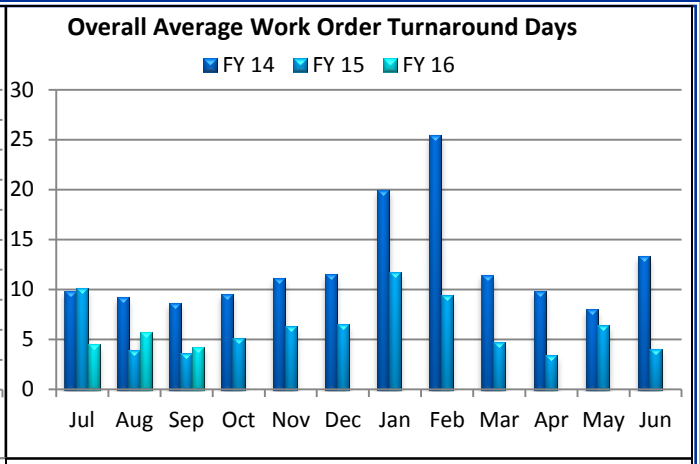

UDOT Traffic Followers and Re-tweets
FY 14
FY 15
FY 16
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun

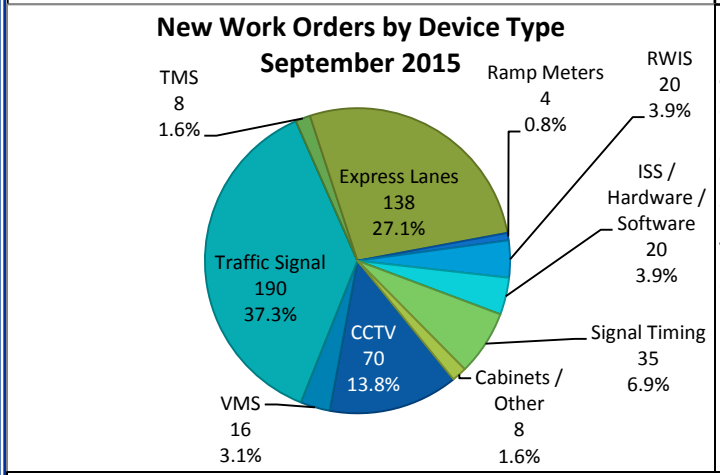

UDOT Traffic App - FY 15
IOS Downloads
Android Downloads
3,000
2,500
2,000
1,500
1,000
500
0
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun

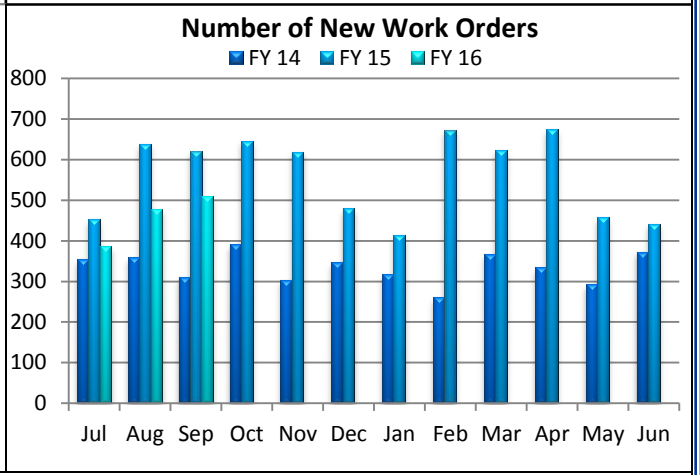

UDOT Traffic App Downloads
FY 14
FY 15
FY 16
22,000
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun


UDOT Traffic App Downloads - September 2015
IOS
Android
140
120
100
80
60
40
20
0
9/1/2015 9/2/2015 9/3/2015 9/4/2015 9/5/2015 9/6/2015 9/7/2015 9/8/2015 9/9/2015 9/10/2015 9/11/2015 9/12/2015 9/13/2015 9/14/2015 9/15/2015 9/16/2015 9/17/2015 9/18/2015 9/19/2015 9/20/2015 9/21/2015 9/22/2015 9/23/2015 9/24/2015 9/25/2015 9/26/2015 9/27/2015 9/28/2015 9/29/2015 9/30/2015



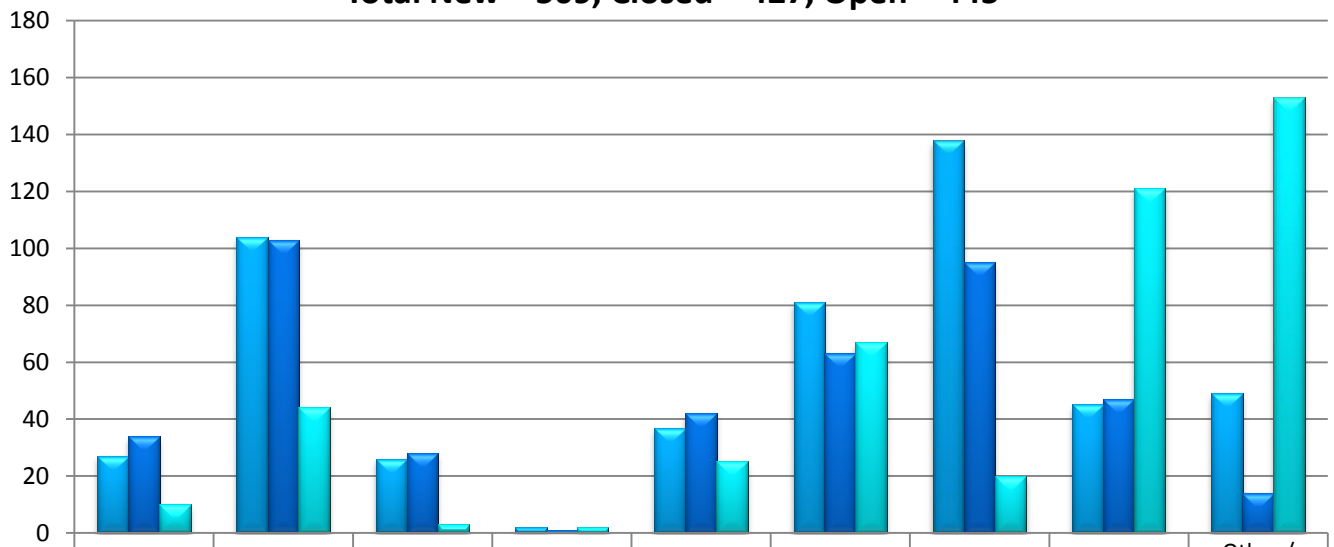






Work Order Statistics by Group - September 2015

Total New = 509, Closed = 427, Open = 445



	R1 Signal Maintenance	R2 Signal Maintenance	R3 Signal Maintenance	R4 Signal Maintenance	Signal Timing	ATMS	Express Lanes	ISS	Other / Engineering / Contractor
New	27	104	26	2	37	81	138	45	49
Closed	34	103	28	1	42	63	95	47	14
Open	10	44	3	2	25	67	20	121	153

CONTROL ROOM

The Control Room began using a new Computer Aided Dispatch (CAD) called FATPOT in mid September. FATPOT allows the TOC Control Room to monitor 22 counties in the state, rather than only the five previously monitored. The Control Room has monitored 30% more incidents since the program was installed. This software upgrade will increase incident and traffic management to more than half of the State.

A TranSuite control software upgrade improved the ATMS Map and Event Manager. In addition, this will improve control room operators efficiency and help provide improved traveler information. This software upgrade also sets a foundation for future software upgrades, which will mean even better traffic operations.

The Control Room managed 880 incidents and 1110 phone calls, worked with Traffic and Safety to compose "Message Monday" and "Fatality Friday" VMS messaging, and activated the TOCL six times throughout the month for significant incidents. The control room supported The I-80 construction project near Parleys Summit by posting VMS messaging and using the variable speed limit signs to reduce speed through the construction zone and continued supporting other long term I-15 construction projects.

Operators quickly responded to September rainstorms by posting weather related VMS messaging, warning drivers of possible standing water and other hazards. Autumn Aloft hot air balloon spectators were encouraged to listen to the HAR and use 511 for traffic related information as they drove to and from the event.

The control room provided key traveler information for the several days of SR-9 road closure after a large rock fell causing the road through Zion National Park to be closed for repairs.

TRAVELER INFORMATION

Traveler Information attended the Utah PIO Conference in St George, UT, staffed the command post for University of Utah football games, coordinated UDOT support for Maverick Center concert events, presented at the UDOT Technical Team meeting regarding the 511 phone line, and led the start of the Express Lanes strategic planning and outreach contracting.

WEATHER INFORMATION

The UDOT Weather Group had 147 overall UDOT weather interactions, ten NWS collaborations and four road weather alerts.

CLIMATOLOGY

September was warmer than average statewide. It was the third warmest September on record at Salt Lake International Airport. Parts of northern and southern Utah received above average precipitation, but central Utah and the rest of the state received below average precipitation. Salt Lake International Airport received 1.74" of precipitation which is 0.53" above normal, with almost all of that rain falling during a three day stretch in the middle of the month.

For the current monthly climate outlook, please visit: http://www.nw-weathernet.com/UDOTMonthlyOutlook.pdf
For the current seasonal outlook, please visit: http://www.nw-weathernet.com/UDOTSeasonalOutlook.pdf

WEATHER OPERATIONS

The Weather Group attended the Aurora/Clear Roads Peer Exchange meeting in Minnesota in September, and presented the UDOT Snow and Ice Performance Measure to this national group. The Weather Group also presented it to the Region 2 Station Supervisor meeting as well.

There were several tours of the TOC Weather Operations room in September including members from the Vermont DOT, legislative auditors, and meteorology students from the University of Utah.

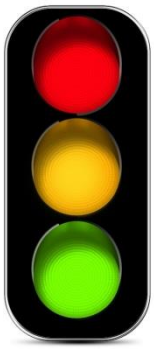
Installation began on an RWIS at the summit of SR-14 east of Cedar City. This weather station will be integrated in October, to be transmitting weather data this winter season.
The Weather Group participated in the rescue and recovery efforts for the Hilldale and Zion National Park flash flooding events by providing specialized weather forecasts focused on the runoff drainages above the search areas for several days after the original events. The forecasts were used to provide advanced flash flood warnings to protect search parties as well as local and UDOT forces restoring the local roads damaged during the floods.

TRAFFIC SIGNAL OPERATIONS

Region 2 - Assisted with detour signal plans for the planned Victory Road (SR-186) near the State Capitol.

Region 3 – Created new signal timing plans for Payson, assisted Saratoga Springs turn on a new traffic signal, helped with BYU football event timing, helped rebuild the signal at Redwood Road and Pony Express Road to accommodate new road widening, turned on a new AWS at US-6 and I-15 off ramp, and helped install a channelizing island at SR-92 and SR-129 in Highland to improve signalized traffic.

Region 4 – Repaired a knocked down pedestrian pole at the Green Springs SPUI, installed back plate reflective tape at two St. George interchanges, and repaired vehicle detection in Mt. Pleasant that had been damaged during pavement roto-milling.



TRAFFIC OPERATIONS AND REPORTING

Project List:

- Involved in the I-215 pavement rehabilitation project.
- Managed Motorways Presentation to MAG TAC.
- Governor's metric for performance.
- R3 support; Lehi Technology Corridor Study.
- 9000 South/9400 South C/D system.
- Redwood Road signal timing support.
- 10600 South interchange modification.
- Bangerter Highway/600 West project.
- I-15 story map; Provo/Orem BRT.
- PeMS procurement.
- Congestion Reporting.
- R4 support.
- I-80/State St EIS.
- MVC corridor planning.
- Moab Main Street corridor/signal spacing study.
- 820 North Provo corridor study.
- San Francisco limited turning movements discussion.
- Springville/Spanish Fork interchange studies.
- 4700 South operational analysis.
- Spanish Fork Main Street pavement rehabilitation project.
- Ramp metering 2017 standards update.
- SR-92 warranty work.
- Provo 300 South reconstruction project.
- I-215 north end congestion.
- Bangerter Highway interchanges.
- Pleasant Grove Blvd access management.

ATMS MAINTENANCE

Teaming: The lab and field teams performed LFOT's on the Region 4 Pine Creek Project and Beaver Climbing Lane Project, creating punch lists of items needing to be corrected prior to device acceptance.

Field: The field team helped a contractor remove asset of Ethernet radios at Cove Fort because this communication link has been replaced by fiber. The team performed LFOT's on the I-15 South Davis project on CCTV, TMS, VMS and ramp metering sites. The team also repaired several Wanco VMS at Halls Crossing. This work required correcting design concerns and repositioning solar panels at the site. Fifty-three work orders were closed in September.

Lab: The Lab tested and repaired 23 ATMS devices, tested two traffic signal cabinets for Region 2, shipped two traffic signal cabinets to contractors; and performed a site inspection on the SR-92 project to verify previous punch list items had been addressed. The Lab closed seven work orders.

Express Lanes Team: The Express Lanes Team rebooted five clusters, repaired ten clusters, completed the weekly system drive through, reset one reader, completed nine preventative maintenance inspections, replaced eight sets of Sensys pucks, performed ten lane preventative maintenance inspections, and closed 95 work orders. The team also completed the final inspections, made minor repairs, and commissioned the I-15 South Davis Project.

ITS ASSET MANAGEMENT

Asset Management integrated one TMS, one RWIS camera, five new Chain Up signs, and 11 new signals. Additionally, they continued checking CCTV images, and developed estimated replacement costs for the ATMS devices.

ITS Standards and Specifications

- All work that was on track for the October 22, Standards Committee meeting was completed and will be included in the package for the Committee.
- Narwhal Group continued on the NEC review of all Standards and Specifications.
- Work on the ATMS Solar Powered Site Standards continued and a second meeting was held. The group collectively brought forth and discussed workable concepts to standardize solar powered ATMS sites. It was determined that an ATMS device load requirement table needed to be developed. The table would be used to determine the power requirements for a particular ATMS site. With the known loads, the engineer would select the photovoltaic systems to safely provide the power. The next meeting will look at a draft load table and start to work with the table to determine what "load groups" need to be classified to develop standardized photovoltaic systems.
- A meeting was held to discuss how the TOC purchases electric power for both ATMS devices and highway lighting. The discussion required examination of the Traffic Signal and ATMS Standard Drawings and Specifications. The standards show that highway lighting is to be "unmetered" and signals and ATMS devices use "metered" power. The discussion concluded that a policy change is required to change highway lighting to "metered" power. This will provide a cost savings to the department. Once this policy change is completed, the Standard Drawings and Specifications will be changed to "metered" power for highway lighting.

Procurement

- The field ITS Ethernet Switch RFP was advertised.
- A low bid purchase was advertised for 45 foot steel, non lowering CCTV poles, to hold Pelco Esprit positioner CCTV cameras. The 45 foot non-lowering pole will have the same base plate and anchor bolt pattern as the 45 foot CCTV lowering pole.

Special Projects:

The new I-215 eastbound and I-15 northbound VMS Concept Report was completed and submitted to Blaine Leonard for review.

Work continued on the IP-CCTV development. Chuck Felice and John Amidon continued to develop the IP CCTV module in the TranSuite software

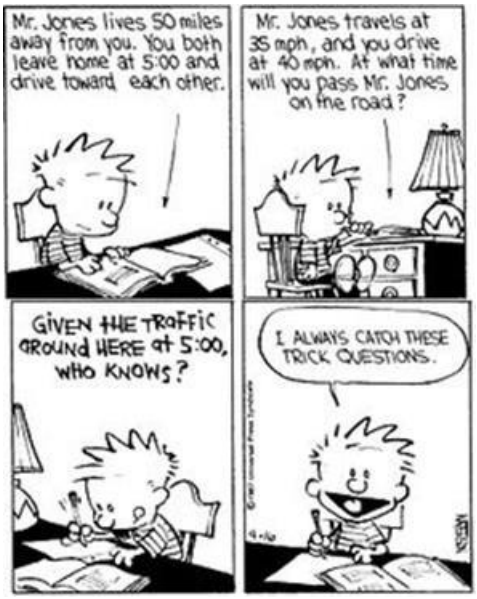
REGION TWO

- SR-36 Main Street in Tooele is getting the first region two installation of Micro-duct conduit and Micro-fiber. This new conduit greatly reduces the footprint of conduit while simultaneously increasing the fiber strand capacity.
- Construction began with the new traffic signal on Columbus Street at 500 North. This new traffic signal will be the first traffic signal built with the signal controller operating and fiber cable spliced and communicating with the TOC before any traffic signal poles are erected. This will vastly improve the speed in which new traffic signals become activated and integrated into the central signal system. This will allow us to have a camera operating on the pole and watch them remove the signal head bags and turn the signal to operation while watching through the camera.

REGION THREE

- **SR-92 CCTV/Hybrid VMS (12641):** Flashers and WANCO VMS installed. Generated construction punch list. Integration will occur in October.
- **Saratoga Springs; Pony Express; SR-68 to 800 West (8581):** Fiber splice details requested. Anticipate CCTV installation in late October.
- **Region 3 traffic signal connections (12774):** Waiting on cooperative agreement signatures with Spanish Fork City to connect three signals through their cable network.
- **US-40 CCTV/Signal connections (12805):** STRATA received circuit electronics for signal connections.
- **Vernal; US-40 @ 2100 West Signal/CCTV (13018):** Construction scheduled for mid October.
- **Roosevelt; US-40 @ 2000 West Signal/CCTV (12980):** Underground construction completed. Project back on hold due to power accessibility issues. Construction anticipated to resume mid October.
- **Provo Canyon RWIS/VMS (11410):** Project awarded. Received all of the ATMS State furnished equipment.
- **US-189; State Park to Rock Cut passing Lanes (11415):** Held PS&E review.
- **Fiber connection to three Maintenance Sheds (13681):** Negotiations for install were not successful, began process with another contractor. Install scheduled for mid October.
- **SR -92; Utility relocate for BOR easement (13707):** NID/pole relocation complete. Needs to be integrated.
- **Spanish Fork; SR-156; 1000 North to I-15 (13687):** Project under construction.
- **Roosevelt; US-40 @ 1500 East Signal/CCTV (13853):** In design.
- **Provo; SR-256; 800 East to Univ Ave BRT (10266):** Evaluating potential ITS deployments.
- **US-40; Myton Bench roadway widening (11358):** Design ongoing.
- **Spanish Fork; Canyon Rd @ 2550 E Signal (10960):** Evaluated and determined wireless radio communication connection. Need to order State furnished equipment.
- **American Fork; SR-74; Main to 300 N widening (11219):** Evaluated scope and determined CCTV deployment need at 300 North.


A THUNDERSTORM IS HEADED THIS WAY
JUST LIKE ON THE WEATHER MAP
JIM DAVIS 5-26


Mr. Jones lives 50 miles away from you. You both leave home at 5:00 and drive toward each other.
Mr. Jones travels at 35 mph, and you drive at 40 mph. At what time will you pass Mr. Jones on the road?
GIVEN THE TRAFFIC AROUND HERE at 5:00, WHO KNOWS?
I ALWAYS CATCH THESE TRICK QUESTIONS.

Acronyms

CCTV	Closed Circuit Television	DPS	Department of Public Safety
EIS	Emergency Information System	HAR	Highway Advisory Radio
I2TMS	Integrated Interagency Traffic Management System		
ITS	Intelligent Transportation System	LFOT	Local Field Operations Test
MIC	Manager in Charge	MOT	Maintenance of Traffic
RWIS	Road-Weather Information System	TAC	Technical Advisory Committee
TMD	Traffic Management Division	TMS	Traffic Monitoring Station
TOC	Traffic Operations Center	VMS	Variable Message Sign

UDOT Keeping Utah Moving